

maculato) nubilaque transversa abbreviata pone medium, nigris; his subtus ad basin macula parva chermesina notatis. Exp. alar. antic. unc. $3\frac{1}{10}$."

It would be supposed from the above description that the ground-colour of the wings in this species was pure white; the fact that a pure white form does exist in the N.E. Himalayas would convince any Lepidopterist living in India that such was the case. I believe, however, that had Westwood been describing the Darjiling type he would have said "alis niveis" rather than the more vague "albis."

The type of *E. consimilis*, which is now in the collection of the British Museum, is of a yellowish cream-colour, not deep enough for "straw-coloured;" it differs from the white form represented by Wood-Mason in nothing but its yellower colour, in which character it perfectly agrees with its male (*E. hallirothius*). I suspect it to be a dimorphic species; and if so, it would be a mistake to regard the snow-white variety as a local race and give it a distinctive name. In the case of *E. meridionalis*, however, the pattern as well as the colouring ("straw-coloured," W.-M.) differs not a little; and therefore his name will stand for this race.

The yellow colour of Westwood's type is not due to age, but is the tint most prevalent in specimens of *Euripus*; were it caused by time it would be rather stramineous than of the pale creamy-sulphur tint which it is. Moreover, of all the examples which I have seen of this species, in both sexes (and I have seen a good many besides the four yellowish ones in our collection), only one female, obtained from Dr. Lidderdale's series, is, as Mr. Wood-Mason says, "pure and dazzling white."

Descriptions of Spirostreptus from Madagascar.

By A. G. BUTLER, F.L.S., F.Z.S., &c.

By a singular *lapsus calami*, I find that I have used the term "nuchal plate" in place of "first dorsal segment" in all three descriptions ('Annals,' April 1882). The "nuchal plate" is a convex and usually elliptical shield between the head and the first dorsal segment, and is present in all the species of *Zephronia* and *Sphærotherium*. It is the part naturally described next to the head; and this may perhaps account for my blunder.

The Aleyonaria of the Bay of Marseilles. By M. A. F. MARION.

The investigation of the Aleyonaria collected by the 'Travailleur' during the expeditions of 1880 and 1881 has led me to prepare a summary of the Cœlenterata of this group, observed by me during the last twelve years upon the shores of Marseilles. The species are numerous; and it seemed to me that the indication of their distribution at the various depths would be an important document

towards the coming investigations. In the present note therefore I shall enumerate the forms captured in our bay in gradually descending from the shore to a depth of 200 metres.

A. *Littoral Zone, including the Meadows of Posidonia Caulini*.—Although the Aleyonaria are not usually littoral animals, we find three species pretty abundantly in the zone that fringes the shore and extends to a depth of 20 metres. These littoral Aleyonaria are of small size, and belong to the family Cornularinæ.

Rhizoxenia rosea, Ph. sp. The corms of this species occur pretty frequently attached to stones a few decimetres under water along the shore of Cape Janet. They are also met with, but more rarely, on the rhizomes of the *Posidonice*, at a depth of 15 metres, at some points on the shore of the isle of Ratonneau.

Clavularia crassa, M.-Edw. (*Cornularia crassa*). The *Cornularia crassa* figured in the 'Règne Animal' is a true *Clavularia* without any cuticular covering, but furnished, on the other hand, with an abundance of sclerites. In the Bay of Marseilles *Clavularia crassa* abounds on the rhizomes of the *Posidonice* of the creek of Ratonneau at a depth of 2 or 3 metres. Some corms of the same species not bearing more than three or four zooids, and presenting only a pale tint, have been observed at much greater depths (110 metres) attached to fragments of shells, beyond the bay, to the south of the Isle of Riou. The reproduction of this species takes place in June. The male colonies differ from the female in the length and slenderness of the polypes. The ova, enveloped in a rather dense mucus, are borne at the extremity of the zooids, after the fashion of the ova of *Dasychone lucullana*. It was upon this species that Kowalevsky and myself in 1879 observed a very distinct total segmentation, the formation of a planula, and the histological differentiation of an ectodermic pseudomesoderm, not passing through the stage of a cellular blastodermic lamella.

We have no zoological information as to the Neapolitan *Clavularia* named *C. ochracea* by G. von Koch (Morph. Jahrb. vii. livr. 3, 1881). This Aleyonarian perhaps does not differ from the one here cited.

Cornularia cornucopie. This species is easily recognizable by its little cornets secreted by the ectoderm, and resembling the protective tubes of the *Tubiporæ*. In the Bay of Marseilles it is associated with *Clavularia crassa*; but it is always rarer, and does not appear to quit the meadows of *Zostera*.

B. *Muddy and Sandy-muddy Zone beyond the Zosteræ*.—The meadows of *Posidonice* are sometimes margined by mud or muddy sand, sometimes by coralligenous gravels. The muddy spaces abound particularly in the north-western region of the bay; and there the depths vary from 30 to 80 metres. The Aleyonaria hold an important place in the fauna of these stations.

Aleyonium palmatum, Pall. Very abundant. All the corms belong to the typical form, the base of which is produced into a long peduncular stalk, destitute of zooids, and buried in the mud. It was collected in the Bay of Biscay in 1880.

Veretillum cynomorium, Pall. Does not quit the muddy bottoms. Frequent near the Ile de Maire and the Goudes at 18 and 20 metres. Descends to 80 metres in the north-western region, towards the mouths of the Rhone. Taken in the Bay of Biscay.

Pteroides griseum, Bob. The most abundant Pennatulid on our coasts. Inhabits the mud of the north-west, outside the isles of Ratonneau and Pomègue (60–80 metres). Some individuals penetrate into the sandy mud to the south of Pomègue. The two varieties, *brevispinosa* and *longispinosa*, are represented; but the second is the more frequent.

Pennatula rubra, Ell. Much rarer than the preceding.

Pennatula phosphorea, L. Very rare in the regions of *Pteroides griseum*.

Leptogorgia viminalis, Pall. The muddy and sandy-muddy bottoms are not the ordinary stations of the Gorgonias; but along the north shore, from L'Estagne to Méjean, we find, at 40, 50, and 70 metres, a Gorgonia with slender branches, which I identify with *Leptogorgia viminalis*. It is attached sometimes to the shells of *Pectunculi*, sometimes to stones or to tiles dropped from the lighters of Saint-Henry. The branches are sometimes very long and not much ramified, drooping; in other cases the polypary is more spread out, like a fan.

Gorgonia graminea, Lam. Very rare. A few small polyparies, scarcely ramified, are associated with the *Leptogorgia*.

Sympodium coralloides, Pall. On *Leptogorgia viminalis*.

C. *Zone of Gravels, Sands, and Coralligenous Submarine Rocks*.—From 30 to 70 metres. Shores of the isles Pomègue and Ratonneau. Submarine rocks off Montredon. Deep reefs of Mangespen. Around the *Zostera* at Carry, Podesta, and Riou. Station of Coral and Gorgonias.

Gorgonia graminea, Lam. Very abundant, and sometimes, especially at Riou, forming very large polyparies.

Gorgonia verrucosa, Pall. Less abundant than the preceding. The sarcosoma is often of a fine yellow colour.

Muricea placomus, Lin. Rare. Coralligenous bottoms of Riou and Podesta.

Corallium rubrum, Costa. Isle of Tiboulén; around Ratonneau. From the Cap Couronne to Carry. Riou.

Sympodium coralloides, Pall.—On all the Gorgonias.

Paralecyonium elegans.—On incrustated Algæ. Ratonneau, off Montredon, Riou. Pretty frequent.

Aleyonium palmatum, var. *acaule*, Marion. This form, which will be considered by some zoologists a true species, I have described in the 'Revue des Sciences Naturelles.' It is characterized by its incrusting base furnished with zooids, and by its dense tissues closely packed with strong spicules.

D. *Muddy Sands of the open Sea, at depths from 100 to 200 metres*.—The Aleyonaria diminish rapidly in importance in proportion as we quit the bay and descend towards the great depths. The coral makes its appearance at some rocky points,—for example, to

the south of La Cassidague. *Aleyonium palmatum* is found to the east of Riou, at 90 and 100 metres, in a very fine muddy sand. The specimens belong to the pedunculate form of the muddy bottoms; the tissues, however, are denser. Among the Pennatulids we no longer meet with *Pteroides griseum*: *Pennatula rubra* and *P. phosphorea* alone persist. Some individuals approach the variety *Pennatula phosphorea aculeata*. A variety of *Clavularia crassa* sometimes occurs.

It may be as well to remark, in conclusion, that this list, although including fifteen species, does not contain all the Aleyonaria indicated in the Mediterranean. Hitherto we have obtained only fragments of *Mopsea elongata* in the great depths, and we have not yet seen upon our shores *Virgularia*, *Funiculina*, *Kophobelemnion*, or, lastly, *Stylobelemnion pusillus*, which, however, issues from the Mediterranean, and occurs in the Bay of Biscay.—*Comptes Rendus*, April 5, 1882, p. 985.

Alteration of Generic Names.

We have been requested to publish the following alterations of the names of certain genera recently proposed in Capt. Broun's 'Manual of New-Zealand Coleoptera'*, they having been previously used either in that order or in other branches of zoology.

Melanochroa for *Cyclomorpha*.

Geochus for *Geophilus*.

Phorostichus for *Pachyodon*.

Dermothrius for *Pachypeza*.

Hydora for *Pachycephala*.

Inosomus for *Stenopus*.

Priates for *Priatelus*.

Methemus for *Capnodes*.

Acrantus for *Homarus*.

Incentia for *Indecentia*.

On the Development of the Ganglion and of the "Ciliated Sac" in the Bud of Pyrosoma. By M. L. JOLLET.

The organ in the Ascidia known as the *vibratile pit*, the *anterior tubercle*, the *olfactory organ*, or the *ciliated sac* consists altogether, as is well known, not only of a vibratile cavity, but also of a canal which follows on it and loses itself, as was first shown by M. de Lacaze-Duthiers, in a glandular mass subjacent to the nervous ganglion.

An olfactory function has generally been ascribed to this organ; nevertheless various hypotheses have been advanced as to its nature;

* This work was reviewed in the 'Annals' for May 1881, p. 412.—ED.